# UNIVERSITAS MUHAMMADIYAH YOGYAKARTA

Kampus terpadu: Jl. Brawijaya, Geblagan, Tamantirto, Bantul, Daerah Istimewa Yogyakarta 55183

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**LAPORAN KEMAJUAN PENELITIAN**

**Informasi Data Usulan Penelitian**

## 1. IDENTITAS PENELITIAN

### A. JUDUL PENELITIAN

| |
|---|
| STRENGTHENING DISASTER MANAGEMENT FOR A SUSTAINABLE FUTURE IN MALAYSIA AND INDONESIA |

### B. SKEMA, BIDANG, TEMA, DAN TOPIK PENELITIAN

| Skema Penelitian | Bidang Fokus Penelitian | Tema Penelitian | Topik Penelitian |
|---|---|---|---|
| Penelitian Terapan | Kebencanaan | Mitigasi, perubahan iklim dan tata ekosistem | Mitigasi dampak perubahan iklim. |

### C. KOLABORASI DAN RUMPUN ILMU PENELITIAN

| Jenis Kolaborasi Penelitian | Rumpun Ilmu 1 | Rumpun Ilmu 2 | Rumpun Ilmu 3 |
|---|---|---|---|
| Kolaboratif Luar Negri | ILMU EKONOMI | ILMU EKONOMI | Ekonomi Pembangunan |

### D. WAKTU PELAKSANAAN

| Tahun Usulan | Tahun Pelaksanaan | Lama Penelitian |
|---|---|---|
| 2022 | 2023 | 1 |

### E. ANCOR RESEARCH

| Anchor Research | Topik Anchor |
|---|---|
| Agus Setyo Muntohar, Prof., S.T., M.Eng.Sc, Ph.D.(Eng.) | Pengelolaan Kebencanaan |

## 2. IDENTITAS PENELITIAN

| Nama | Peran | Tugas |
|---|---|---|
| Diah Setyawati Dewanti, S.E., M.Sc., Ph.D. | Ketua Pengusul | |

| Nama | Peran | Tugas |
|---|---|---|
| Endah Saptutyningsih, Prof. Dr., S.E., M.Si. | Anggota Pengusul | Analisa data kunatitatif |
| Pazri Nugraha | Mahasiswa Bimbingan | Mengambil data kuantitatif |

**3. MITRA KERJASAMA PENELITIAN (JIKA ADA)**

Pelaksanaan penelitian dapat melibatkan mitra kerjasama, yaitu mitra kerjasama dalam melaksanakan penelitian, mitra sebagai calon pengguna hasil penelitian, atau mitra investor

| Mitra | Nama Mitra | Kepakaran |
|---|---|---|
| Universiti Malaysia Sarawak | Dr. Nur Zaimah binti Ubaidillah | Kebencanaan |

**4. KOLABORASI PENELITIAN (JIKA ADA)**

| Mitra | NIDN/NIK | Instansi |
|---|---|---|
| Dr. Nur Zaimah Binti Ubaidillah | 0000000000000000 | Universiti Malaysia Sarawak (UNIMAS) |

**5. LUARAN DAN TARGET CAPAIAN**

## Luaran Wajib

| Tahun | Jenis Luaran |
|---|---|
| 1 | Publikasi Jurnal Internasional terindeks SCOPUS, |
| 1 | Naskah Kebijakan |
| 1 | Hak Cipta |

## Luaran Tambahan

| Tahun | Jenis Luaran |
|---|---|

**6. KLUSTER**

| Kluster | Sub Kluster | Group Riset | Mata kuliah |
|---|---|---|---|
| | | | -- |

**7. ANGGARAN**

Rencana anggaran biaya penelitian mengacu pada PMK yang berlaku dengan besaran minimum dan maksimum sebagaimana diatur pada buku Panduan Penelitian dan Pengabdian kepada Masyarakat.

Total Keseluruhan RAB Rp. 30,000,000

Tahun 1 Total Rp. 30,000,000

| Jenis Pembelanjaan | Komponen | Item | Satuan | Vol. | Harga Satuan | Total |
|---|---|---|---|---|---|---|
| BAHAN | ATK (Kertas/Tinta/Alat Tulis dll) | ATK Kebutuhan data collection | Paket | 250 | Rp. 3,000 | Rp. 750,000 |
| BAHAN | Bahan (Habis Pakai) | Souvenir responden | Unit | 250 | Rp. 20,000 | Rp. 5,000,000 |
| PENGUMPULAN DATA | Transportasi/BBM | Bensin | OK(Kali) | 25 | Rp. 50,000 | Rp. 1,250,000 |
| PENGUMPULAN DATA | Biaya Telepon | Biaya telpon team | OK(Kali) | 8 | Rp. 50,000 | Rp. 400,000 |
| PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN | Biaya Seminar Internasional | registration fee | Paket | 1 | Rp. 1,500,000 | Rp. 1,500,000 |
| PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN | Biaya Luaran KI (Paten, Hak Cipta , dll) | biaya pendaftaran HKI | Paket | 1 | Rp. 500,000 | Rp. 500,000 |
| PELAPORAN, LUARAN WAJIB, DAN LUARAN TAMBAHAN | Article Processing Charge (APC) | Subsidi APC Scopus | Artikel | 1 | Rp. 1,350,000 | Rp. 1,350,000 |
| PENGUMPULAN DATA | Uang Harian | uang harian tim pengambil data (internal pimpinan desa) | OH | 60 | Rp. 100,000 | Rp. 6,000,000 |
| PENGUMPULAN DATA | Tunjangan Kehadiran FGD | Honor kehadiran FGD | OK(Kali) | 14 | Rp. 250,000 | Rp. 3,500,000 |
| PENGUMPULAN DATA | Honorarium Petugas Survey | Petugas survey | OH/OR | 3 | Rp. 1,000,000 | Rp. 3,000,000 |
| PENGUMPULAN DATA | Honorarium Sekretariat/Administrasi | Honorarium asisten lapangan | OB | 3 | Rp. 1,750,000 | Rp. 5,250,000 |

**8. LEMBAR PENGESAHAN**

**HALAMAN PENGESAHAN**
**LAPORAN KEMAJUAN PENELITIAN SKEMA:**

Judul : STRENGTHENING DISASTER MANAGEMENT FOR A SUSTAINABLE FUTURE IN MALAYSIA AND INDONESIA

Peneliti/Pelaksana : Diah Setyawati Dewanti, S.E., M.Sc., Ph.D.

NIDN : 0526108201

Jabatan Fungsional : Lektor

Program Studi/Fakultas : Ekonomi

Nomor HP : 082133691838

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Anggota

Nama                                     : Endah Saptutyningsih, Prof. Dr., S.E., M.Si.
NIDN                                     : 0529117502
Jabatan Fungsional                       : Guru Besar
Program Studi/Fakultas                   : Ekonomi

Nama                                     : Pazri Nugraha
NIM                                      : 20190430059
Prodi                                    : S1 Ekonomi

Mitra                                    : Universiti Malaysia Sarawak
Nama Mitra                               : Dr. Nur Zaimah binti Ubaidillah
Kepakaran                                : Kebencanaan

Nama                                     : Dr. Nur Zaimah Binti Ubaidillah
NIK                                      : 0000000000000000
Institusi                                : Universiti Malaysia Sarawak (UNIMAS)

Biaya                                    : Rp. 30,000,000

Yogyakarta, 09 Juni 2023
Mengetahui,
Kepala LRI,

Prof.Dr. Dyah Mutiarin, MS.i.
NIK : 19700502 199603

**9. RINGKASAN**

To increase the disaster resilience, it is important to decrease the vulnerable impact of disaster in the household. In the context of preparedness, the capacities of households is the important indicator in implementing disaster management. Term of disaster preparedness refers to the efforts made to expand awareness and readiness in handling the dangers, relevant agencies, preventative actions and other catastrophe related data. The main objective of this research is to investigate the behavioral determinants of disaster preparedness and assess the role of economic ang policy factors of disaster preparedness. Malaysia and Indonesia are two countries with highly incidents with many types of natural disasters, focusing on flood and landslide. Therefore, involving preparation or plans to save lives or property and aid the operations of response and rescue services. This study explores the factors of disaster preparedness in the context of a developing nation, Malaysia and Indonesia. Measures drawn from the Theory of Planned Behaviour will be analysed between disaster preparedness and its behavioural antecedents. The outcome of the study would assist policymakers in comprehending the significance of integrating behavioural elements into policymaking. In the event of a disaster, the enforcement of regulations governing disaster preparedness should be ingrained in society. This research is carry out for two years, which first year is to measure the model to determine the role of investigation behavioural determinants in disaster preparedness phase. The PLS-SEM is applied to the study's exploratory nature with the non-normality of the data distribution. The respondents will take place in Sarawak, Malaysia and Yogyakarta, Indonesia with aged between 18 to 65 years old. The output of this research is try to targeted the policy brief to the government which will be produced in the second year. The policy brief for the disaster preparedness is the strategic plan to be implemented by the government. In the first year, the output is publication from the findings of PLS-SEM. The "TKT level" could be shown in level 4.

**10. KEYWORDS**

Preparedness, disaster, socio-demography, behavioural

**11. HASIL PELAKSANAAN PENELITIAN**

Disaster events are often happening without warning. It is a complex, multi-faceted and global issue. Most disasters lead to consequences such as socio-economic, mental, and physical effects. According to Wisner, Adams, & World Health Organization (2002), there are two types of the disaster which are natural and man-made. Natural disaster includes volcano eruptions, tsunamis, flash floods, and earthquakes. Man-made disaster consists of human accidents, military conflicts, and political unrest. Based on a study by Makwana (2019), developing countries are more susceptible to disaster due to poverty, resource deficiency, limited access to education, inadequate infrastructure and lack of awareness and knowledge.

Malaysia and Indonesia are vulnerable to both natural and man-made disaster, therefore, experience tremendous losses. Hence, government intervention is imperative in the wake of the disaster. Government intervention has evolved in recent years from providing financial assistance to psychosocial interventions. In addition, psychosocial intervention is provided in the aftermath and prior to any disaster events by providing awareness, preparedness and necessary knowledge and skills to the society. Furthermore, the improvement of preparedness in facing adverse events is one of the efforts to reduce disaster risk (UNISDR, 2009). The preparedness to handle oneself in the event of a disaster is necessary to minimise any disaster difficulties in the absence of immediate health and emergency responders.

Floods and landslides are two of the most frequent natural disasters in Malaysia and Indonesia. In the past few years, these natural disasters have increased tremendously due to human activities. Despite being a natural based disaster, human activities such as uninhibited development and haphazard land clearings boost the severity of floods, particularly at the peak discharge and the time of concentration (Abdul Rahman, 2014).

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they are for disasters. Flood hazards are easily accepted by people who have a great sense of self-responsibility.

In terms of the relationship between social norms and disaster preparedness intentions, social norms are defined as the impacts on an individual's behaviour that are based on what is considered typical by the individual's social group. The social norms have also been divided into injunctive norms, which deal with whether or not a behaviour is acceptable, and descriptive norms, which deal with the prevalence of the behaviour (Vinnel, Milfont, & McClurec, 2021). While self-efficacy, which is defined as confidence in performing a specific behaviour, such as overcoming hurdles to achieve a specific habit, can be used to examine the relationship between perceived behavioural control and disaster preparedness intentions. Individuals' high acceptance of the crisis management scenario was due to their great self-efficacy (Zaman, Zahid, Habibullah & Din, 2021).

Few studies were found in the context of developing countries to understand the behavioural factors in disaster preparedness. Mojtahedi & Oo (2012) revealed that a clear understanding of preparedness is important for future enhancement in reducing vulnerability and effective and accurate risk assistance. To this end, this study concentrates on investigating the behavioural determinants of disaster preparedness among youth in the case of Sarawak, Malaysia, a state in a developing country.

Seeking or proposing definitions of disaster can be a complex task that brings out the pedantic in scholars and may create considerable frustration. Some of the complexity and frustration can be addressed by specifying the purpose and audience for definitions of disasters. Such definitions must be placed into a meaningful context that clarifies the essential goal of the definition and the uses to which the definition is to be put. At the outset, it must be acknowledged that the goals in creating definitions vary and that there is no single legitimate purpose or content for definitions. Further, one must clarify whether disaster is being defined as a concept or as an area of study, although there is an inevitable overlap between the two approaches (Karver, 1986). Disaster events are complex, multi-dimensional phenomena, with a wide range of human, socio- economic, cultural, political, and physical impacts. While the disaster event itself presents an immediate shock to impacted populations, the ramifications of disaster events tend to be ongoing:

> *Exposure to disaster impact is only the opening salvo. As the disaster unfolds, and far into the aftermath, the affected populations grapple with loss and change, consequences that persevere long after the risk for physical harm has*

*dissipated. This trilogy of forces - exposure to hazard, massive personal and societal loss, and profound and enduring life change - characterize the nature of disaster (Shultz, Espinel, Galea, & Reissman, 2006, p. 69)*

Although natural hazards have been a risk for human communities for centuries, the number of disaster events and their associated impacts has been increasing, particularly since the 1960s (Joakim, 2013).

The resilience concept is fuzzy and having different on each person. The use of term resilience has beeen conceptualize by the Hyogo Framework for Action which stated this as the guide and define the characteristics of resilient communities. The resilient need to cope disaster with rapid-onset shocks or significant and protracted source of stress. The resilience paradigm shifts disaster causation from environmental determinism to social constructionism which disaster manifest the disequilibrium in the social structure and reduce the communities' capacity to withstand shocks and stresses. The United Nations International Strategy for Disaster Reduction (UNISDR) notion of resilience tends to be all-encompassing as it views resilience to be the capacity of a system, community or society potentially exposed to hazards to adapt through resistance or change to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of organising itself to increase the capacity for learning from past disasters for better future protection and to improve risk reduction measures (UNISDR, 2005). Thus, the UNISDR definition of resilience appears to be underpinned by elements of complex science. Terms such as 'capacity', 'learning', 'orga- nising' and 'adapt', which potentially signal community agency, radicalised approaches to dealing with disaster. In many ways, the UNISDR definition of resilience assumes that resilient communities have the capacity to 'bounce forward' and move on following a disaster. Capacity is used here to mean a combination of all the strengths and resources available within a community, society or orga- nisation that can reduce the level of risk or the effects of a disaster. This may include physical, institutional, social or economic means as well as skilled personal or collective attributes such as leadership and management (Alagh, 2021).

In political ecology and global environmental change literature, resilience is related to the concept of adaptive capacity, that is the ability of a system to adjust to change, moderate the effects of and cope with a disturbance (Burton, Huq, Lim, Pilifosova, &

Schipper, 2002). Adaptive capacity is needed to reduce climate change impacts, particularly in climate-related disasters. This has implications for policy and institutional resilience. In examining resilience implications of policy-informed response to climate change, Adger (Adger et al., 2011) and colleagues argue that adaptive capacity is, in general, influenced by economic development and technology as well as by social factors such as human capital and governance. However, adaptation can be either positive or negative. Positive adaptation depends on the institutional rules, norms and way of doing things and includes skills, abilities and knowledge, as well as the willingness to use these tools to achieve set goals. Negative adaptation tends to suppress the institutional rules, norms and values through, for exam- ple, corruption, oppression and human rights abuses (Carpenter, 2011). Although adaptive capacity has been primarily associated with climate change, it can be used in a number of contexts, whether related to climate, economic, conflict or other stresses and shocks (Jones et al., 2010).

The composite model of community resilince within which pyschological factors as the central role. One approach to manage the community resilience involves the measurement qualities as the components of the model and determine the utility as the predictos of resilience. In this research, the researcher use livelihoods assets or capitals and measurement of personal characteristics to influence the response to adversity. The cognitive component underpins the ability to impose a sense of coherence or meaning on ad- verse and atypical experiences and making decisions regarding whether to confront the problem. The final element, environmental resilience, describes community practices (e.g., sense of community) which mitigate adverse consequences and maximise the potential for recovery. The wealth and diversity of psychological variables that could be implicated in this context necessitates an initial selection of salient variables. The utility of a model is a function of its ability to account for differences in resilience when assessed against a range of hazards. Self-efficacy describes individuals' appraisal of their performance capability and influences their receptivity to information and the likelihood of their adopting risk reduction behaviours. Sense of community (feelings of belonging and attachment for people and places) encourages involvement in community re- sponse following disaster and increases access to, and utilisation of, social support networks. Indi- viduals who perceive themselves as having no investment in their community may develop a level of

detachment which, following a disaster, may trigger feelings of isolation and encourage learned helplessness and heighten social vulnerability. Sense of community also provides insights into the prevailing degree of community fragmentation and, consequently, the level of support for mitigation strategies in- volving collective community action. Problem-focused coping (confronting the problem) represents a mechanism for facilitating resilience. Risk perception per se, has proven an inadequate guide to the adoption of risk reduction behaviour. Here risk perception is examined from the perspective of the relationship between hazard effects and community activities (e.g., whether it disrupts employment) and its implications for identifying the relative salience of different potential threats (Paton et al., 2013). The livelihoods assets is defined as human capital, social capital, financial capital, physical capital and natural capital (Dewanti, Ayuwat, & Yongvanit, 2019).
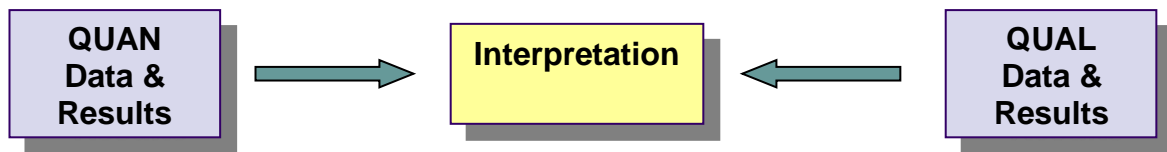
Methods

To determine the role of investigating behavioural determinants of disaster preparedness, the data is analysed using PLS-SEM. PLS-SEM is applied due to the study's exploratory nature, the low sample, and the possible non-normality of the data. PLS-SEM consists of the measurement and structural model. The measurement model assesses the relationship between the factors and the indicators it represented. The tests for measurement model include composite reliability, indicator loadings, discriminant validity and average variance extracted.  The structural model assesses the path relationship between the independent and dependent factors/variables used in this study.

The study is conducted in Sarawak, Malaysia. The research respondents consist of those living in the study setting areas aged from 18 to 65 years old. This age range is considered acceptable since anyone under the age of 18 in Malaysia is considered a minor, and participation in the study would require the consent of a parent or guardian. This study employed convenience sampling, a type of nonprobability sampling approach wherein participants of the study are viewed as "convenient" providers of data by the researcher. The minimum sample size for a SEM, is n = 100-150 according to studies by Ding, Velicer, and Harlow (1995) and Tabachnick and Fidell (2001).  A G*power analysis will be conducted to determine whether the sample size is adequate.

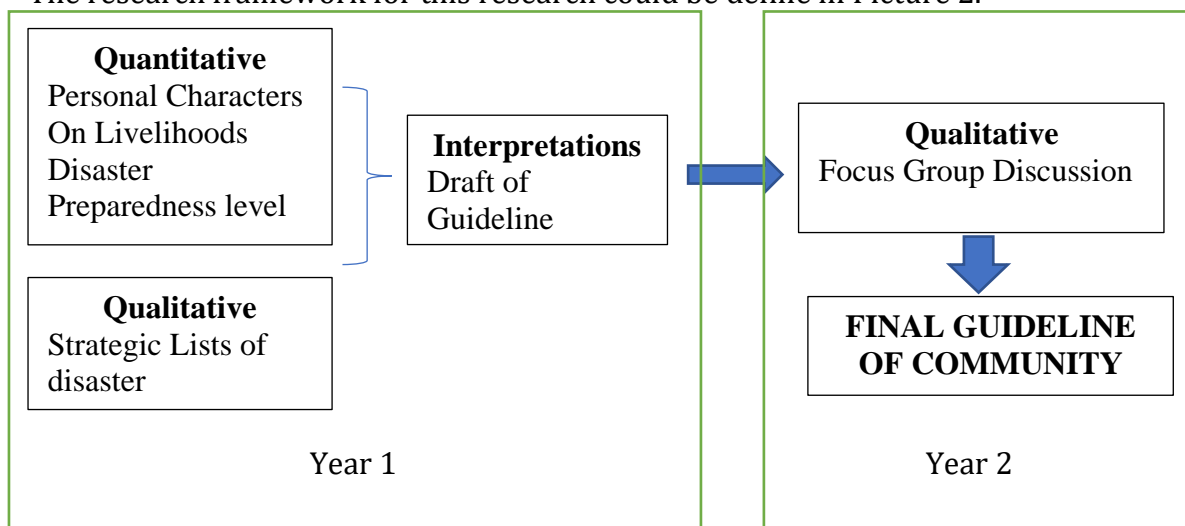This research is refering the concurrent mixed methods design when quantitative and

qualitative are applied to established the disaster preparedness of flood and landslide. The purpose of this mixed methods is to validate the findings generated by each method.

| QUAN Data & Results | → | Interpretation | ← | QUAL Data & Results |

Picture 1. The Concurrent Mixed Methodology

The unit analysis of this research is households/individuals. The variables integrated in this research are personal characteristics and livelihoods assets as the resources for post-landslide disaster. Quantitative phase is collected by structured interview guideline through questionnaire. The household are choosen based on systematic random sampling based on the map of the village. Meanwhile the quantitative is collected, the qualitative will be collected to the head of hamlet. Qualitative phase carry out by focuss group discussion and indepth interview. The indepth interview prepared as the first phase in qualitative to recognize main idea of head of hamlet concerning community resilience post-landslide disaster management. The focuss group discussion conducted after the draft of guideline has been drawn by the researcher

The research framework for this research could be define in Picture 2.

**Year 1**

**Quantitative**
Personal Characters
On Livelihoods
Disaster
Preparedness level

**Interpretations**
Draft of Guideline

**Qualitative**
Strategic Lists of disaster

**Year 2**

**Qualitative**
Focus Group Discussion

↓

**FINAL GUIDELINE OF COMMUNITY**

This collaboration research is applied to integrated with *Program Pengabdian Kepada Masyarakat* Internal Fund from UMY and UNIMAS. It is also provide Matching Grant Fund from the UNIMAS to support the research and community services program in Sarawak and Yogyakarta province as the implementation of the research findings. Dr. Nur Zai is the expert on the social behavior for the implementation of disaster preparedness.

The result of the Path Analysis

| Equation | Variables | | R square | StandCoef Beta |
|---|---|---|---|---|
| | **X** | **Y** | | |
| 1 | **TSP_Total** | | 0.141 | 0.376** |
| | **SC_Total** | | 0.023 | 0,150* |
| | **TSP 1.2** | | | 0.190* |
| | **TSP 1.3** | | 0.198 | 0.280** |
| | **TSP 2.2** | | | 0.163* |
| | **SC 3.1** | Preparedness | 0.147 | 0.251* |
| | **NC 1.4** | | | 0.137* |
| | **NC 2.2** | | 0.123 | 0.169* |
| | **NC 2.4** | | | -0.145* |
| | **PC 2.1** | | 0.061 | -0.172* |
| | **PC 3.3** | | | 0.190* |
| 2 | **HC_Total** | | 0.020 | 0.141* |
| | **HC 1.3** | | 0.073 | -0.257* |
| | **SC_Total** | | 0.074 | 0.272** |
| | **SC 2.2** | | 0.199 | 0.332** |
| | **NC_Total** | | 0.023 | -0.152* |
| | **NC 2.4** | | 0.079 | -0.205* |
| | **PC_Total** | Transformasi Struktur dan Proses | 0.099 | 0.315** |
| | **PC 1.1** | | 0.219 | -0.125* |
| | **PC 1.2** | | | 0.193* |
| | **PC 3.2** | | | 0.215* |
| | **PC 3.3** | | | 0.171* |
| | **PC 3.4** | | | -0.165* |
| | **FC_ln_pendapatan** | | 0.039 | 0.198* |

**12. STATUS LUARAN**

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**13. PERAN MITRA**

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**14. KENDALA PELAKSANAAN PENELITIAN**

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**15. RENCANA TAHAPAN SELANJUTNYA**

. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

**16. DAFTAR PUSTAKA**

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**17. LAMPIRAN-LAMPIRAN**

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